Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: **SITZ RANCH MANAGEMENT PARTNERSHIP**
9100 MT HWY 91 N
DILLON, MT 59725-8503

2. Type of action: **APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 41B 30028374**

3. Water source name: **GROUNDWATER**

4. Location affected by project: **SWNESW, SEC. 32, T5S T8W, Beaverhead County**

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

This project will pump water from a production well for sprinkler irrigation purposes. The applicant is proposing to supply sufficient amounts of water to increase crop production. The proposed production well will supply water to one center pivot. This application is for a 700 gpm up to 289.8 acre-feet/year well in the SWNESW of Sec. 32, T10N R3W, Beaverhead County. The application will be used to irrigate 105 acres in the W2W2SE and the SW of Sec. 32 T10N R3W, Beaverhead County, from April 01- October 15.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(Include agencies with overlapping jurisdiction)

MT Natural Heritage Program - Species of Concern, T/E
Montana Bureau of Mines and Geology-GWIC
NRCS Web Soil Survey
Bill Uthman, DNRC Hydrogeologist

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: **No significant impact.**
This application will utilize groundwater at a rate of 700 gpm.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: **No significant impact.**

Groundwater source, see below.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: **No significant impact.**
This is an application for a 700 gpm groundwater well dug to a depth of 300 feet. The well log filed with this application shows a topsoil layer from 0.0-20.0 feet, clay layer from 20.0-80.0 feet, rocks and clay layer from 80.0-220.0 feet, and a volcanic bedrock layer from 220.0-300.0 feet. This appropriation of groundwater may cause stream depletion at a future time within the basin; the applicant stated, "Any potential stream depletion, if it were to occur, would take place much further down valley…" The applicant concluded by stating, "Stream depletion will not occur due to the separation of the deep aquifer from the shallow system, or if it does it will be very small and occur at a great distance from…either depletion well". A quantitative assessment of net stream depletion was not submitted by the applicant and basic hydrologic principals have either been erroneously applied or disregarded and the statement provided by the applicant cannot be verified by the department Hydrogeologist to show evidence of net stream depletion or impacts to adjacent surface flows.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: **No significant impact.**
The groundwater well was completed in 04/23/2003 by Lindsay Drilling, a licensed well driller. A 30 HP pump is being used to divert water from the well, and conveyed directly to the sprinkler irrigation system. Since the project will be utilizing groundwater, there are no known significant channel impacts, flow modification impacts, or barriers or impacts to riparian areas.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: **No significant impact.**
The MT Heritage Program identified the Long-billed Curlew, *Numenius americanus*, Swainson's Hawk, *Buteo swainsoni*, Grasshopper Sparrow, *Ammodramus savannarum*, Great Basin Pocket Mouse, *Perognathus parvus*, Sage Thrasher, *Oreoscoptes montanus*, Gray Wolf, *Canis lupus*, Black-tailed Jack Rabbit, *Lepus californicus*, and the Brewer's Sparrow, *Spizella breweri* as species of special concern in the vicinity of the project.

Long-billed Curlew prefers various habitats which include: grasslands, wetlands, tidal flats/shores and riparian areas, and prefers breeding habitats in prairies and grassy meadows, generally near water. This invertevore is threatened by cultivation of grasslands, organochlorides, and hunting.

Swainson's Hawks are commonly found in areas which have riparian, cropland, desert, cultivated lands, grassland, savanna, and mixed woodland habitats and can tolerate extensive cultivation in nesting areas. Threats to this species include expansion of cropland unsuitable for foraging and residential and commercial development in former agricultural and grassland areas.

Grasshopper Sparrows have a large migratory range and prefer grassland for breeding and non-breeding habitats. Loss, degradation, and incompatible management of grassland habitats are shown to significantly create declines in populations and threats from cultivation, urban sprawl, and reforestation.

Great Basin Pocket Mouse is primarily solitary and prefers arid, sandy short-grass steppes; brushland covered with sagebrush, butterbrush, and rabbit brush; pinyon-juniper

pines. This species is usually found in habitats with light-textured, deep soils and also among rocks.

Sage Thrashers are suffering from widespread habitat loss, fragmentation of sagebrush habitats, grazing, invasive grasses, fire, and brood parasitism. Terrestrial non-breeding habitats include desert and shrubland/chaparral and breeding habitat which include sagebrush plains, primarily in arid or semi-arid location rarely around towns. This species thrives where sagebrush habitat is maintained.

The Grey Wolf has no particular habitat preference. They are a carnivore species with a far reaching territory which encompasses many variable habitat types. These canines have been exterminated from large areas through trapping, shooting, poisoning, reduction in prey populations, direct human caused mortalities, and habitat loss. The threats to northern Rocky Mountain populations have been reduced or eliminated as evidence by the population exceeding the numerical, distributional, and temporal recovery goals each year since 2002 (USFWS).

Black-tailed Jackrabbit inhabits open plains, fields and deserts, open country with scattered thickets or patches of shrubs. Unsuitable habitats include dense forested vegetation and large water bodies that do not freeze. This species has a ICUN Red List Category of LC- least concern and a Rounded Global Status of: G5- Secure.

Brewer's Sparrow's can be abundant in sagebrush, desert, and shrubland/chaparral habitat and will breed in high densities. This species prefers habitat with tall sagebrush shrubs for nesting and song perches; and low percentage grass cover to facilitating foraging on the ground. Loss of breeding habitat and sagebrush fragmentation are a concern for this species and are linked to population declines.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: **No significant impact.**
No wetlands claimed in the project area.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: **No significant impact.**
No ponds claimed in the project area.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: **No significant impact.**

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: **No significant impact.**
The Montana Noxious Weed Survey and Mapping System did not identify that they surveyed the project area (T5N R8W Sec. 32). The landowner is responsible for controlling any establishment of noxious weed as a result of disturbance.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: **No significant impact.**

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: **No significant impact.**

The State Historic Preservation Office was not contacted about this proposed project. The land has been historically used for municipal irrigation purposes and the area would have already disturbed any historic sites. Since the property is located on City of Helena property, the decision to conduct a cultural inventory would be at the discretion of the City of Helena.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: **No significant impact.**

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: **No significant impact.**

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: **No significant impact.**

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: **No significant impact.**

PRIVATE PROPERTY - *Assess whether there is any government regulatory impacts on private property rights.*
Yes___ No___ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: **No significant impact.**

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? **No significant impact.**

(*b) Local and state tax base and tax revenues?* **No significant impact.**

(c) Existing land uses? **No significant impact.**

(*d) Quantity and distribution of employment?* **No significant impact.**

(e) Distribution and density of population and housing? **No significant impact.**

(f) Demands for government services? **No significant impact.**

(*g) Industrial and commercial activity?* **No significant impact.**

(h) Utilities? **No significant impact.**

(i) Transportation? **No significant impact.**

(j) Safety? **No significant impact.**

(k) Other appropriate social and economic circumstances?

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: **No significant impact.**

Cumulative Impacts: **No significant impact.**

3. ***Describe any mitigation/stipulation measures:*** **No measures taken**

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

PART III. Conclusion

1. ***Preferred Alternative:*** **Issue the authorization for the proposed project**

2 ***Comments and Responses:*** **There have been no comments or responses.**

3. ***Finding:***
*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: **An EA is the appropriate level of analysis for this action. There are no significant impacts identified, therefore an EIS is not required.**

Name of person(s) responsible for preparation of EA:

Name: Lindsay Arthur
Title: Water Resource Specialist
Date: 07/31/2007